



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/766,906 | 01/30/2004 | Seung-Sik Yang | 1793.1121 | 5692 |

21171 7590 08/21/2007
STAAS & HALSEY LLP
SUITE 700
1201 NEW YORK AVENUE, N.W.
WASHINGTON, DC 20005

| |
|----------|
| EXAMINER |
|----------|

RILEY, MARCUS T

| | |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

2625

| | |
|-----------|---------------|
| MAIL DATE | DELIVERY MODE |
|-----------|---------------|

08/21/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|-------------------------------|---------------------------------|--|
| Office Action Summary | Application No. 10/766,906 | Applicant(s) YANG, SEUNG-SIK | |
| | Examiner Marcus T. Riley | Art Unit 2625 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 1/30/04.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>attached</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The USPTO "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility" (Official Gazette notice of 22 November 2005), Annex IV, reads as follows:

Descriptive material can be characterized as either "functional descriptive material" or "nonfunctional descriptive material." In this context, "functional descriptive material" consists of data structures and computer programs which impart functionality when employed as a computer component. (The definition of "data structure" is "a physical or logical relationship among data elements, designed to support specific data manipulation functions." The New IEEE Standard Dictionary of Electrical and Electronics Terms 308 (5th ed. 1993).) "Nonfunctional descriptive material" includes but is not limited to music, literary works and a compilation or mere arrangement of data.

When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare *In re Lowry*, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994) (claim to data structure stored on a computer readable medium that increases computer efficiency held statutory) and *Warmerdam*, 33 F.3d at 1360-61, 31 USPQ2d at 1759 (claim to computer having a specific data structure stored in memory held statutory product-by-process claim) with *Warmerdam*, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure per se held nonstatutory).

In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory. See *Lowry*, 32 F.3d at 1583-84, 32 USPQ2d at 1035.

1. **Regarding claims 9-11;** claims 9-11 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter as follows. Claims 9-11 defines a computer readable recording medium embodying functional descriptive material. However, the claim does not define a computer-readable medium or memory and is thus non-statutory for that reason (i.e., "When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be

Art Unit: 2625

realized” – Guidelines Annex IV). That is, the scope of the presently claimed a computer readable recording medium can range from paper on which the program is written, to a program simply contemplated and memorized by a person. The examiner suggests amending the claim to embody the program on “computer-readable medium” or equivalent in order to make the claim statutory. Any amendment to the claim should be commensurate with its corresponding disclosure.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims are 1-4 rejected under 35 U.S.C. 102(b) as being anticipated by Osada ‘569.

Regarding claim 1; Osada '569 discloses a printing method for recovering an error, comprising: storing intermediate data corresponding to a document to be printed (*"The rendering buffer 1410 temporarily stores the intermediate data of the rendering object generated by the PDL translator unit 1409 until it is actually printed."* column 3, lines 12-14); converting the intermediate data into printing data (*"When 1-page intermediate data is stored in the rendering buffer 1513, the rendering unit 1514 starts print processing."* column 12, lines 31-33); Osada '569 discloses determining whether an error has occurred (*"Error flag: "1" indicates that some error has occurred in the printing apparatus 110."* column 9, lines 60-63); while the intermediate data is converted into the printing data (*"The JL parser unit 1408 analyzes the received data and determines, on the basis of predetermined JL information, whether the data supplied indicates information about the printing apparatus 110 or PDL data, thereby sending the data to the corresponding processing...thereby converting the data into intermediate data as a rendering object suitable for rendering... The rendering buffer 1410 temporarily stores the intermediate data of the rendering object generated by the PDL translator unit 1409 until it is actually printed."* column 2, lines 65-67 thru column 3, lines 1-24); and in response to determining that an error has occurred, converting the intermediate data into image type data and converting the image type data into the printing data, wherein the document is printed using the printing data (*"This apparatus further includes a data conversion means (corresponding to the PDL translator unit 1512) for converting print data (corresponding to PDL data), of the above print job, which is associated with the execution of printing into intermediate data (corresponding to rendering command), intermediate data storage means (corresponding to the rendering buffer 1513) for storing the intermediate data obtained by conversion performed by the data*

conversion means, and rendering means (corresponding to the rendering unit 1514) for generating image data to be printed from the intermediate data stored in the intermediate data storage means, and outputting the image data to a printing unit (corresponding to the printer engine unit 1515)." column 20, lines 34-46).

Regarding claim 2; Osada '569 discloses in response to determining that an error has not occurred or after determining that an error has occurred, and the intermediate data has been converted into image type data and the image type data has been converted into the printing data, determining whether the intermediate data has been completely converted into the printing data; and in response to determining that the intermediate data has not been completely converted into the printing data, going back to converting the intermediate data into the printing data ("*This apparatus further includes a data conversion means (corresponding to the PDL translator unit 1512) for converting print data (corresponding to PDL data), of the above print job, which is associated with the execution of printing into intermediate data (corresponding to rendering command), intermediate data storage means (corresponding to the rendering buffer 1513) for storing the intermediate data obtained by conversion performed by the data conversion means, and rendering means (corresponding to the rendering unit 1514) for generating image data to be printed from the intermediate data stored in the intermediate data storage means, and outputting the image data to a printing unit (corresponding to the printer engine unit 1515).*" column 20, lines 34-46).

Regarding claim 3; Osada '569 discloses where in response to determining that an error has occurred, loading the stored intermediate data; converting the loaded intermediate data into the image type data; and converting the image type data into the printing data ("*This apparatus*

Art Unit: 2625

further includes a data conversion means (corresponding to the PDL translator unit 1512) for converting print data (corresponding to PDL data), of the above print job, which is associated with the execution of printing into intermediate data (corresponding to rendering command), intermediate data storage means (corresponding to the rendering buffer 1513) for storing the intermediate data obtained by conversion performed by the data conversion means, and rendering means (corresponding to the rendering unit 1514) for generating image data to be printed from the intermediate data stored in the intermediate data storage means, and outputting the image data to a printing unit (corresponding to the printer engine unit 1515)." column 20, lines 34-46).

Regarding claim 4; Osada '569 discloses where the error is a general protection fault type error (*"Error flag: "1" indicates that some error has occurred in the printing apparatus 110. This flag is added to a replay packet sent from the printing apparatus 110 to the host computer 109."* column 6, lines 1-4).

4. Claims are 5-8 rejected under 35 U.S.C. 102(b) as being anticipated by Osada '569.

Regarding claim 5; Osada '569 discloses a printing apparatus for recovering an error, comprising: a storage unit storing intermediate data corresponding to a document to be printed storing intermediate data corresponding to a document to be printed (*"The rendering buffer 1410 temporarily stores the intermediate data of the rendering object generated by the PDL translator unit 1409 until it is actually printed."* column 3, lines 12-14); a printer driver converting the intermediate data into printing data or, in response to a control signal, converting the intermediate data into image type data and then converting the image type data into the printing data (*"This apparatus further includes a data conversion means (corresponding to the PDL*

Art Unit: 2625

translator unit 1512) for converting print data (corresponding to PDL data), of the above print job, which is associated with the execution of printing into intermediate data (corresponding to rendering command), intermediate data storage means (corresponding to the rendering buffer 1513) for storing the intermediate data obtained by conversion performed by the data conversion means, and rendering means (corresponding to the rendering unit 1514) for generating image data to be printed from the intermediate data stored in the intermediate data storage means, and outputting the image data to a printing unit (corresponding to the printer engine unit 1515)." column 20, lines 34-46); and a control unit inspecting whether an error has occurred while the intermediate data is converted into the printing data, outputting a result of the inspection as the control signal, and in response to the control signal, loading the intermediate data from the storage unit and outputting the loaded intermediate data to the printer driver, wherein the document is printed using the printing data (*"In addition, the print data generated by the application unit 1401 of the host computer 109 is converted into PDL data by the printer driver unit 1402 and is transmitted to the printing apparatus 110 through the transmission buffer 1403 and the I/F driver unit 1404. When acquisition of information about the printing apparatus 110, setting of information, or job control is to be performed through the utility unit 1405 during data transmission, since exclusive control is performed by the I/F driver unit 1404, a request from the utility unit 1405 cannot be satisfied until the above PDL data is completely transmitted. This impairs the real-time performance."* column 4, lines 13-24);

Regarding claim 6; Osada '569 discloses where the control unit inspects whether the intermediate data has been completely converted into the printing data by the printer driver, and outputs a result of the inspection as a conversion signal to the printer driver, and the printer

driver converts the intermediate data into the printing data in response to the conversion signal (*"When 1-page intermediate data is stored in the rendering buffer 1513, the rendering unit 1514 starts print processing."* column 12, lines 31-33);.

Regarding claim 7; discloses where the control unit comprises: an error inspector, which inspects whether an error has occurred while the intermediate data is converted into the printing data and outputs a result of the inspection as the control signal (*"In addition, the print data generated by the application unit 1401 of the host computer 109 is converted into PDL data by the printer driver unit 1402 and is transmitted to the printing apparatus 110 through the transmission buffer 1403 and the I/F driver unit 1404. When acquisition of information about the printing apparatus 110, setting of information, or job control is to be performed through the utility unit 1405 during data transmission, since exclusive control is performed by the I/F driver unit 1404, a request from the utility unit 1405 cannot be satisfied until the above PDL data is completely transmitted. This impairs the real-time performance."* column 4, lines 13-24); and a data loader, which in response to the control signal, loads the intermediate data from the storage unit and outputs the loaded intermediate data to the printer driver (*"When 1-page intermediate data is stored in the rendering buffer 1513, the rendering unit 1514 starts print processing."* column 12, lines 31-33);

Regarding claim 8; Osada '569 discloses a spooler loaded with intermediate data from the storage unit and outputting the loaded intermediate data to the printer driver, wherein the printer driver converts the intermediate data received from the spooler into the printing data (*"The rendering buffer 1410 temporarily stores the intermediate data of the rendering object generated by the PDL translator unit 1409 until it is actually printed."* column 3, lines 12-14).

5. Claims are 9-11 rejected under 35 U.S.C. 102(b) as being anticipated by Osada '569.

Regarding claim 9; Osada '569 discloses a computer-readable recording medium storing a computer program comprising: storing intermediate data corresponding to a document to be printed (*"There are also provided a ...storage medium storing a printing control program."* column 6, lines 9-11); converting the intermediate data into printing data (*"When 1-page intermediate data is stored in the rendering buffer 1513, the rendering unit 1514 starts print processing."* column 12, lines 31-33); determining whether an error has occurred (*"Error flag: "1" indicates that some error has occurred in the printing apparatus 110."* column 9, lines 60-63) while the intermediate data is converted into the printing data (*"The JL parser unit 1408 analyzes the received data and determines, on the basis of predetermined JL information, whether the data supplied indicates information about the printing apparatus 110 or PDL data, thereby sending the data to the corresponding processing...thereby converting the data into intermediate data as a rendering object suitable for rendering... The rendering buffer 1410 temporarily stores the intermediate data of the rendering object generated by the PDL translator unit 1409 until it is actually printed."* column 2, lines 65-67 thru column 3, lines 1-24); and in response to determining that an error has occurred, converting the intermediate data into image type data and converting the image type data into the printing data, wherein the document is printed using the printing data(*"This apparatus further includes a data conversion means (corresponding to the PDL translator unit 1512) for converting print data (corresponding to PDL data), of the above print job, which is associated with the execution of printing into intermediate data (corresponding to rendering command), intermediate data storage means (corresponding to the rendering buffer 1513) for storing the intermediate data obtained by conversion performed by*

the data conversion means, and rendering means (corresponding to the rendering unit 1514) for generating image data to be printed from the intermediate data stored in the intermediate data storage means, and outputting the image data to a printing unit (corresponding to the printer engine unit 1515)." column 20, lines 34-46).

Regarding claim 10; Osada '569 discloses in response to determining that an error has not occurred or after in response to determining that an error has occurred, determining whether the intermediate data has been completely converted into the printing data; and in response to determining that the intermediate data has not been completely converted into the printing data, going back to converting the intermediate data into the printing data ("*This apparatus further includes a data conversion means (corresponding to the PDL translator unit 1512) for converting print data (corresponding to PDL data), of the above print job, which is associated with the execution of printing into intermediate data (corresponding to rendering command), intermediate data storage means (corresponding to the rendering buffer 1513) for storing the intermediate data obtained by conversion performed by the data conversion means, and rendering means (corresponding to the rendering unit 1514) for generating image data to be printed from the intermediate data stored in the intermediate data storage means, and outputting the image data to a printing unit (corresponding to the printer engine unit 1515).*" column 20, lines 34-46).

Regarding claim 11; Osada '569 discloses where in response to determining that an error has occurred, loading the stored intermediate data; converting the loaded intermediate data into the image type data; and converting the image type data into the printing data ("*This apparatus further includes a data conversion means (corresponding to the PDL translator unit*

1512) for converting print data (corresponding to PDL data), of the above print job, which is associated with the execution of printing into intermediate data (corresponding to rendering command), intermediate data storage means (corresponding to the rendering buffer 1513) for storing the intermediate data obtained by conversion performed by the data conversion means, and rendering means (corresponding to the rendering unit 1514) for generating image data to be printed from the intermediate data stored in the intermediate data storage means, and outputting the image data to a printing unit (corresponding to the printer engine unit 1515)." column 20, lines 34-46).

6. Claims are 9-11 rejected under 35 U.S.C. 102(b) as being anticipated by Osada '569.

Regarding claim 12; Osada '569 discloses a printing method for recovering an error, comprising: converting intermediate data into printing data (*"When 1-page intermediate data is stored in the rendering buffer 1513, the rendering unit 1514 starts print processing."* column 12, lines 31-33); determining whether an error has occurred (*"Error flag: "1" indicates that some error has occurred in the printing apparatus 110. column 9, lines 60-63); while the intermediate data is converted into the printing data ("The JL parser unit 1408 analyzes the received data and determines, on the basis of predetermined JL information, whether the data supplied indicates information about the printing apparatus 110 or PDL data, thereby sending the data to the corresponding processing...thereby converting the data into intermediate data as a rendering object suitable for rendering... The rendering buffer 1410 temporarily stores the intermediate data of the rendering object generated by the PDL translator unit 1409 until it is actually printed."* column 2, lines 65-67 thru column 3, lines 1-24); converting the intermediate data into image type data and converting the image type data into the printing data if determined that an

Art Unit: 2625

error has occurred (*"This apparatus further includes a data conversion means (corresponding to the PDL translator unit 1512) for converting print data (corresponding to PDL data), of the above print job, which is associated with the execution of printing into intermediate data (corresponding to rendering command), intermediate data storage means (corresponding to the rendering buffer 1513) for storing the intermediate data obtained by conversion performed by the data conversion means, and rendering means (corresponding to the rendering unit 1514) for generating image data to be printed from the intermediate data stored in the intermediate data storage means, and outputting the image data to a printing unit (corresponding to the printer engine unit 1515)." column 20, lines 34-46*); determining if the intermediate data has been completely converted into the printing data and printing the document using the printing data if determined that the intermediate data has been completely converted into the printing data (*"This apparatus further includes a data conversion means (corresponding to the PDL translator unit 1512) for converting print data (corresponding to PDL data), of the above print job, which is associated with the execution of printing into intermediate data (corresponding to rendering command), intermediate data storage means (corresponding to the rendering buffer 1513) for storing the intermediate data obtained by conversion performed by the data conversion means, and rendering means (corresponding to the rendering unit 1514) for generating image data to be printed from the intermediate data stored in the intermediate data storage means, and outputting the image data to a printing unit (corresponding to the printer engine unit 1515)." column 20, lines 34-46*).

Regarding claim13; Osada '569 discloses where if determined that the intermediate data has not been completely converted into printing data, going back to converting the intermediate

Art Unit: 2625

data into printing data (*"This apparatus further includes a data conversion means (corresponding to the PDL translator unit 1512) for converting print data (corresponding to PDL data), of the above print job, which is associated with the execution of printing into intermediate data (corresponding to rendering command), intermediate data storage means (corresponding to the rendering buffer 1513) for storing the intermediate data obtained by conversion performed by the data conversion means, and rendering means (corresponding to the rendering unit 1514) for generating image data to be printed from the intermediate data stored in the intermediate data storage means, and outputting the image data to a printing unit (corresponding to the printer engine unit 1515)." column 20, lines 34-46).*

Regarding claim 14; Osada '569 discloses where the error is a general protection fault type error (*"Error flag: '1' indicates that some error has occurred in the printing apparatus 110. This flag is added to a replay packet sent from the printing apparatus 110 to the host computer 109."* column 6, lines 1-4).

7. Claims are 15-18 rejected under 35 U.S.C. 102(b) as being anticipated by Osada '569.

Regarding claim 15; Osada '569 discloses a printing apparatus for recovering an error, comprising: a storage unit storing intermediate data corresponding to a document to be printed (*"The rendering buffer 1410 temporarily stores the intermediate data of the rendering object generated by the PDL translator unit 1409 until it is actually printed."* column 3, lines 12-14); a printer driver converting the intermediate data into printing data (*"When 1-page intermediate data is stored in the rendering buffer 1513, the rendering unit 1514 starts print processing."* column 12, lines 31-33); and a control unit determining whether an error has occurred while the intermediate data is converted into the printing data, and in response to the determination,

Art Unit: 2625

loading the intermediate data from the storage unit to the printer driver, wherein the document is printed using the printing data(*"This apparatus further includes a data conversion means (corresponding to the PDL translator unit 1512) for converting print data (corresponding to PDL data), of the above print job, which is associated with the execution of printing into intermediate data (corresponding to rendering command), intermediate data storage means (corresponding to the rendering buffer 1513) for storing the intermediate data obtained by conversion performed by the data conversion means, and rendering means (corresponding to the rendering unit 1514) for generating image data to be printed from the intermediate data stored in the intermediate data storage means, and outputting the image data to a printing unit (corresponding to the printer engine unit 1515)."* column 20, lines 34-46); .

Regarding claim 16; Osada '569 discloses where the control unit inspects whether the intermediate data has been completely converted into the printing data by the printer driver, and outputs a result of the inspection as a conversion signal to the printer driver, and the printer driver converts the intermediate data into the printing data in response to the conversion signal (*"The JL parser unit 1408 analyzes the received data and determines, on the basis of predetermined JL information, whether the data supplied indicates information about the printing apparatus 110 or PDL data, thereby sending the data to the corresponding processing...thereby converting the data into intermediate data as a rendering object suitable for rendering... The rendering buffer 1410 temporarily stores the intermediate data of the rendering object generated by the PDL translator unit 1409 until it is actually printed."* column 2, lines 65-67 thru column 3, lines 1-24);

Regarding claim 17; Osada '569 discloses an error inspector which inspects whether an error has occurred while the intermediate data is converted into the printing data and outputs a result of the inspection as a control signal (*"In addition, the print data generated by the application unit 1401 of the host computer 109 is converted into PDL data by the printer driver unit 1402 and is transmitted to the printing apparatus 110 through the transmission buffer 1403 and the I/F driver unit 1404. When acquisition of information about the printing apparatus 110, setting of information, or job control is to be performed through the utility unit 1405 during data transmission, since exclusive control is performed by the I/F driver unit 1404, a request from the utility unit 1405 cannot be satisfied until the above PDL data is completely transmitted. This impairs the real-time performance.* column 4, lines 13-24); and a data loader which in response to the control signal, loads the intermediate data from the storage unit and outputs the loaded intermediate data to the printer driver (*"When 1-page intermediate data is stored in the rendering buffer 1513, the rendering unit 1514 starts print processing."* column 12, lines 31-33);

Regarding claim 18; Osada '569 discloses a spooler loaded with intermediate data from the storage unit and outputting the loaded intermediate data to the printer driver, wherein the printer driver converts the intermediate data received from the spooler into the printing data (*"The rendering buffer 1410 temporarily stores the intermediate data of the rendering object generated by the PDL translator unit 1409 until it is actually printed."* column 3, lines 12-14).

8. Claims are 19 & 20 rejected under 35 U.S.C. 102(b) as being anticipated by Osada '569.

Regarding claim 19; Osada '569 discloses a printing apparatus for recovering an error, comprising: a storage unit storing intermediate data corresponding to a document to be printed (*"The rendering buffer 1410 temporarily stores the intermediate data of the rendering object*

Art Unit: 2625

generated by the PDL translator unit 1409 until it is actually printed.” column 3, lines 12-14); a printer driver converting the intermediate data into image type data (“When 1-page intermediate data is stored in the rendering buffer 1513, the rendering unit 1514 starts print processing.” column 12, lines 31-33); and then converting the image type data into printing data in response to a control signal (“and rendering means (corresponding to the rendering unit 1514) for generating image data to be printed from the intermediate data stored in the intermediate data storage means, and outputting the image data to a printing unit (corresponding to the printer engine unit 1515).” column 20, lines 34-46); and a control unit determining whether an error has occurred while the intermediate data is converted into the printing data, outputting a control signal according to the determination, and in response to the control signal, outputting the loaded intermediate data to the printer driver, wherein the document is printed using the printing data (“This apparatus further includes a data conversion means (corresponding to the PDL translator unit 1512) for converting print data (corresponding to PDL data), of the above print job, which is associated with the execution of printing into intermediate data (corresponding to rendering command), intermediate data storage means (corresponding to the rendering buffer 1513) for storing the intermediate data obtained by conversion performed by the data conversion means, and rendering means (corresponding to the rendering unit 1514) for generating image data to be printed from the intermediate data stored in the intermediate data storage means, and outputting the image data to a printing unit (corresponding to the printer engine unit 1515).” column 20, lines 34-46).

Regarding claim 20; Osada ‘569 discloses where the control unit inspects whether the intermediate data has been completely converted into the printing data by the printer driver, and

Art Unit: 2625

outputs a result of the inspection as a conversion signal to the printer driver, and the printer driver converts the intermediate data into the printing data in response to the conversion signal (*"The JL parser unit 1408 analyzes the received data and determines, on the basis of predetermined JL information, whether the data supplied indicates information about the printing apparatus 110 or PDL data, thereby sending the data to the corresponding processing...thereby converting the data into intermediate data as a rendering object suitable for rendering... The rendering buffer 1410 temporarily stores the intermediate data of the rendering object generated by the PDL translator unit 1409 until it is actually printed."* column 2, lines 65-67 thru column 3, lines 1-24).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marcus T. Riley whose telephone number is 571-270-1581. The examiner can normally be reached on Monday - Friday, 7:30-5:00, est.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Twyler Lamb can be reached on 571-272-7406. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

Art Unit: 2625

like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Marcus T. Riley
Assistant Examiner
Art Unit 2625



TWYLER LAMB
SUPERVISORY PATENT EXAMINER